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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/696,442	10/28/2003	Andrew James Dallas	758.1046USC2	6769

7590 06/08/2005

Attention: Mara E. Liepa  
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P.O. Box 2903  
Minneapolis, MN 55402-0903

EXAMINER

LAWRENCE JR, FRANK M

ART UNIT	PAPER NUMBER
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1724

DATE MAILED: 06/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/696,442

Applicant(s)

DALLAS ET AL.

Examiner

Frank M. Lawrence

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 02 May 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-7, 9, 10 and 12-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7, 9, 10 and 12-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Double Patenting*

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 1-5, 7, 9, 12-14, 17-20, 25 and 26 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 5-8, 12, 14, 15, 17 and 21 of U.S. Patent No. 6,638,339 in view of Kinhead (5,626,820). The instant claims differ from the patented claims in that there is a second different activated carbon adsorbent material. Kinhead '820 discloses an air filtering system having different varieties of impregnated activated carbon (figures 1A-1C, 3, 7, col. 4, lines 55-62, col. 5, lines 15-26, col. 6, lines 8-18, col. 10, lines 10-30, claims 11-19). It would have been obvious to one having ordinary skill in the art at the time of the invention to modify the activated carbon filter of the instant claims by including a second variety of activated carbon in order to provide a means for more effectively removing different types of gaseous contaminants. Also, one skilled in the art would understand that the portions of the instant claims that are recited in the patented claims are capable of functioning without a housing.

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3. Claims 1-5, 7, 9 and 12-26 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 6, 10, 11, 13 and 14 of U.S. Patent No. 6,432,177 in view of Kinkead '820. The instant claims differ from the patented claims for the same reasons discussed in paragraph 2 above, and would have been obvious to modify for the reasons also given above.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 12, 13, 15, 16 and 26 are rejected under 35 U.S.C. 102(b) as being anticipated by Kinkead '820.

6. Kinkead et al. '820 teach an air filtering system including an inlet for receiving a dirty gas stream, an outlet that is capable of being connected to any device requiring cleaned air, a particulate HEPA filter (24), and chemical filters that can include activated carbon that is impregnated with an acidic or basic substance for removing basic or acidic contaminants, respectively (figures 1A-1C, 3, 7, col. 4, lines 55-62, col. 5, lines 15-26, col. 6, lines 8-18, col. 10, lines 10-29, claims 11-19). In an example, a first layer of activated carbon impregnated with acid and a second layer of activated carbon impregnated with a base can be used upstream of a HEPA filter.

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1-3, 7, 9, 12, 17- 23, 25 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP '177 in view of Kinhead '820.

9. JP '177 discloses a fuel cell system, comprising a fuel cell (2) having an oxidant inlet, a filter assembly having an inlet side for receiving dirty oxidant gas, a filter element (20) including a solid, rounded activated carbon filter and electret filters for removing dust and poisoning substances from the oxidant gas, and an outlet side connected to the oxidant inlet of the fuel cell (see figures, abstract). The activated carbon filter is inherently capable of removing substances such as those listed in instant claim 9 and is also capable of permanently retaining contaminants as well as releasably capturing contaminants if a temperature or pressure differential were applied. The instant claims differ from the disclosure of JP '177 in that the activated carbon is impregnated with an acid or base and that there is a second activated carbon or different adsorbent and a HEPA filter in addition to the first adsorbent. Kinhead '820 discloses a filter system as described in paragraph 6 above. It would have been obvious to one having ordinary skill in the art at the time of the invention to modify the activated carbon filter of the instant claims by including a second variety of impregnated activated carbon and a HEPA filter in order to provide a means for more effectively removing different types of gaseous and particulate contaminants (see Kinhead et al. col. 9, line 65 to col. 10, line 24, claims 11-19).

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10. Claims 4-6, 14 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP '177 in view of Kinkead et al. '820 as applied to claims 1, 12 and 20 above, and further in view of Berger et al. '715.

11. JP '177 in view of Kinkead et al. '820 discloses all of the limitations of the claims except that the activated carbon is granulated or is curved and extruded. Berger et al. '715 disclose an activated carbon filter for removing contaminants from a gas stream, comprising granulated activated carbon that is mixed with a binder and extruded into a cylindrical shape (figures, col. 5, lines 39-57, col. 6, lines 49-67). It would have been obvious to one having ordinary skill in the art at the time of the invention to modify the activated carbon filter of the primary references by using a curved, extruded granular activated carbon in order to provide a filter that can be employed with wider pressure drop limits, more diversified filtration properties, and increased ability to retain solids (col. 2, lines 16-38).

12. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over JP '177 in view of Kinkead et al. '820 as applied to claim 1 above, and further in view of Nakanishi et al. '642.

13. JP '177 in view of Kinkead et al. '820 discloses all of the limitations of the claims except that the filter system comprises a hydrophobic layer. Nakanishi et al. '642 disclose a fuel cell system, comprising a fuel cell (21) having an oxidant inlet, a filter assembly including a dust filter (25) with an inlet for receiving dirty oxidant gas, solid zeolite molecular sieve filter beds (27) for removing gases other than oxygen and argon from air, a hydrophobic layer in a water separator (34) and an outlet for supplying cleaned oxidant to the fuel cell (col. 2, lines 48-55, col. 3, lines 7-57, figures 1-2). It would have been obvious to one having ordinary skill in the art at the time of the invention to modify the system of the primary references by incorporating a

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hydrophobic layer in order to provide a means for capturing moisture from the gas stream that could negatively affect the adsorption capacity of the adsorption layer or the performance of the fuel cell.

### ***Response to Arguments***

14. Applicant's arguments filed May 2, 2005 have been fully considered but they are not persuasive. It is unclear why the applicant states that the double patenting rejection is premature because the rejection can be made at any point during prosecution of the application. Applicant argues that none of the cited prior art discloses a second adsorbent layer, however Kinhead et al. discloses the use of different layers of different types of impregnated activated carbons for removing different contaminant types, anticipating claims 12, 13, 15, 16 and 26. The teaching of Kinhead et al. is also used as a motivation to combine with the JP '177 reference in new obviousness rejections of the claims reciting the use of a fuel cell in combination with the filter. Applicant also argues that the Kinhead et al. patent fails to disclose a filter system for use with a fuel cell, however there is nothing in claim 12 and its dependents to distinguish over the teaching of the patent. The Kinhead et al. filter system is capable of filtering different varieties of contaminated gases intended for various end uses.

### ***Conclusion***

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The reference to Muraoka (5,772,738) discloses impregnated activated carbon filter layers for removing acidic or basic contaminants.

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16. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Frank M. Lawrence whose telephone number is 571-272-1161. The examiner can normally be reached on Mon-Thurs 7:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on 571-272-1166. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Frank M. Lawrence  
Primary Examiner  
Art Unit 1724

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*Frank Lawrence*

*6-7-05*